GenAI Applications for Public Service Classrooms: Potential, Problems, and Paths for Qualitative Interview Research

Abstract

Generative Artificial Intelligence (GenAI) is quickly becoming a necessity in modern organizational life. The technology can reduce redundancy, help with creative processes, and add value to almost every facet of the organization's business. These features will certainly result in profits for investors in private corporations, but they will also serve to level the playing field for cash-strapped public and nonprofit agencies. Students will be expected to demonstrate competence and skills in GenAi tools such as ChatGPT, Microsoft Co-Pilot, and Zapier. Given these realities, I chose to incorporate GenAi into a long-standing interview assignment for my Introduction to Public Policy course. This paper highlights lessons my students and I have gained from this experience in four key areas: (1) Using GenAI to improve primary questions and follow-ups, helping to create a useful structured or semi-structured interview guide for the researcher, (2) Using GenAI to rapidly transcribe recorded interviews through applications such as Otter.Ai to save hundreds of hours of transcribing; (3) Using GenAI to identify potential coding categories or schemes, and (4) bringing back the dead (more on this later). I will describe lessons in each of these areas, provide guidance on effective use of prompts, explain the limitations and ethical concerns associated with GenAI and LLMs, and describe future research into classroom integration of GenAI technology.

What is Generative AI and How Does it Work?

Transformer based applications are the most ubiquitous (e.g., Co-Pilot, ChatGPT). They work by translating input through Natural Language Processing to predict appropriate responses based on probability distributions learned during model training. They also respond to various code languages (Python, R, CSS, HTML, JAVA, etc.) and are capable of processing SQL requests in large databases. As we will discuss below, continuous model training is necessary to supplant the widely acknowledged issue of response bias, "AI Hallucinations," and other problematic outputs associated with early AI LLM usage. Luckily, one benefit of open access to the platform is an increasingly diverse array of users with an array of interests, knowledge bases, cultures, and lived experiences. Thus, usage of the model facilitates continuous learning (White, 2020; Law, 2023) An unfortunate consequence of massive use of GenAI is the possibility of increasing dependence on AI for tasks that are more suited to human effort and decision making, along with global concerns about data privacy, storage, management, and transparency related to GenAI and other forms of AI.

Application Area 1: Using GenAI to improve primary questions and follow-ups, helping to create a useful interview schedule.

GenAI is useful at the onset of a research project when a researcher is designing the interview schedule for their project. Here, the researcher may prompt GenAI to help in ensuring that the research question and variables of interest are present in each of the primary questions. They may also ask GenAI for help with follow-ups, *interview prompts*, and questions that the researcher may not have included in the draft. In fulfilling this purpose, the Transformer is

pulling from an enormous amount of information contained in the LLMs database with millions of perspectives and the ability to immediately read and analyze all the available literature on qualitative interviewing. In this respect, GenAi may be acting as a coach or a less intimidating version of one's graduate methods professors. Polishing and refining questions makes it more likely that the interviewer will be confident, relaxed, and ready to engage with their conversational partner (Rubin & Rubin, 2001).

Ways to Take Advantage of This Feature

Present Draft Questions	"What are the key benefits and drawbacks of the preliminary questions I have written for this project?
Create a Persona: Ask GenAI	"You are a public policy scholar with vast experience in qualitative interviewing. Please tell me what you would ask that I forgot to ask."
Generating Question Types:	"I need questions for X Participant related to Romzek & Dubnick's accountability typology."
Generating Scenarios/Cases	"Please produce a case study, story, scenario, game…that might help me to ask about this topic indirectly due to its sensitive nature"

Application Areas 2-3: Instant Transcription and Coding

Before exploring this application area, a quick caveat is offered and will be revisited later in the paper: data anonymization, confidentiality, privacy, and consent are every bit as important if not more so with GenAi research than traditional research. Best practices suggest never putting sensitive or personal data into GenAi chatbot queries or prompts. It is also worth noting that each of the functions described below are not done perfectly and cannot be expected to replace specialized knowledge and human oversight.

The days of the foot pedal cassette hellscape that was interview transcription in the "before times" have given way to instant transcription. A task that once took eager researchers three or so hours to do for every hour of recorded tape is now done with the click of a few buttons using programs such as Otter.Ai. This reduction in labor means that I can conduct three additional one-hour interviews in the time that it took me in 2009 to transcribe a single hour-long tape. Careful review of transcripts is still important, and researchers must account for the difficulties GenAI may have with some languages, accents, idioms, and other figures of speech. Developing intercoder reliability at the point of transcription should be incorporated (e.g., a human transcribes every Nth section of tape, etc.).

Coding

Developing categories and considering relationships is an area where Glaser (1969) suggests that "grounded theory" may bubble up. GenAi is effective at recognizing patterns in speech that make it an incredible tool for preliminary coding and identifying themes in qualitative research. These codes are not set in stone, but they may provide a starting point for developing perspective on the data and the relationship between the data and the research question(s) underlying the project. GenAI can develop effective comparison tables, provide arguments for coding choices, and cite passages in the interview to support the points made. As with transcription, a researcher should have a plan for ensuring consistency in coding and intercoder reliability between the research team and the AI bot.

Application Area Four: Bringing Back the Dead (and Still Living)

Due to their connection to Large Learning Models, GenAI applications are able to take on the persona of anyone a prompt engineer might ask them to assume. Over the course of 20 years in the policy classroom, I have often heard students express disappointment that they are not able to directly engage in debates and discussions with luminaries like Jeremy Bentham. GenAI makes this a little more feasible. Because GenAI can be instructed to take on the role of Bentham, students get to ask questions in a conversational way that are similar to the ones they would ask if Bentham crawled out of his glass case at Oxford and began speaking. GenAi, through its ability to act within a specified persona, will respond as if it is calling Bentham back from the grave. Of course, all that is happening here (as with all other areas of GenAI) is that LLMs are

providing a “mirror” of the human intellectual experience. ChatGPT will never know Bentham’s secret motives, desires, points of pride, heartaches, or bad outfit stories. It is a machine, not the Witch of Endor, and we have to remember that there are limits to the requirement to suspend our disbelief. With these important caveats in place, it is pretty magical to be able to “ask” the people from our textbooks and foundational documents. While these responses are never going to be perfect, this is a way to engage and foster critical thinking in policy students’ assignments.

Working with AI: Effective Prompts and Data Considerations

Prompt Engineering, the use of effective prompts to elicit useful responses from GenAI, is a rapidly growing field of study. Researchers such as Jules White at Vanderbilt University and Jeanne Law at Kennesaw State have been instrumental leaders in helping to train effective prompt use. Professor White offers a Pattern-based approach while Professor Law leverages her English Composition expertise to suggest her “RhetPrompt” technique. RhetPrompt is fairly intuitive, as it is based on the principles of rhetoric and storytelling. The researcher considers: persona, purpose, audience, tone, context, and genre. After eliciting the initial GenAI response, the researcher uses traditional writing processes to improve and revise (Law, 2024).

(Law, 2024)

Limitations, Ethics, Reminders

While discussing the application areas of GenAI in policy classrooms, it is equally important to remember that GenAI has several noteworthy limitations: (1) it is using NLP and algorithms to provide the most approximate version of the response requested within its ability and understanding. AI is neither God or the Delphic Oracle. It is a tool that can be harnessed to make our jobs as scholars more exciting, more efficient, and more creative. It is not a replacement for seminal human thought and should never be treated as an ultimate authority source. GenAI, at present, is heavily influenced by the Global North in terms of language and the underlying values represented in this language. It helps us remember that words are simply symbols, and because it reflects all of the human experience, it can produce biased responses and make silly mistakes ("AI Hallucinations" occur when the chatbot spouts out unrelated text or nonsense in response to a prompt).

Emergent Regulatory Schemes

Because of the tremendous volumes of data required to train LLMs and GenAI,concerns regarding data privacy, storage, and management are paramount at this stage of the innovation curve. The EU has taken a more aggressive regulatory approach, as showcased in the GDPR legislation that has taken effect. In the United States, a patchwork of regulatory agencies is tasked with regulating one respective facet of all industry, leading to some questions about territory and redundancy/duplication. Moreover, the United States federal system ensures that

other government levels will be able to participate in developing regulatory architecture for ethical use of GenAI.

Conclusion

A new tool always comes with a learning curve and risks. Generative AI has the potential to enhance interview research and other areas of public policy classroom delivery, though we must be cautious in protecting data privacy and remembering that we are not talking to an actual person of God.

Interactive Application

(Based on AI Prompt and response)

I have listed three assignments that ChatGPT suggested based on this article that will add an interactive dimension to the work and provide immediate application in the classroom and beyond.

References

Jules white prompt pattern guide

Jeanne law RhetPrompt

AI Produced Content In This Section

Assignment 1: Exploring AI-Generated Interview Questions

Objective: Understand the role of GenAI in enhancing qualitative research.

Task:

1. Use a GenAI tool (e.g., ChatGPT) to generate primary and follow-up interview questions for a hypothetical research project in public policy.
2. Compare these questions with those you would develop independently.
3. Write a short reflection (200-300 words) on the similarities, differences, and potential benefits/limitations of using GenAI in this context.

Discussion Questions:

- How can GenAI improve the efficiency and quality of interview question development?

- What ethical considerations should researchers keep in mind when using AI to assist with qualitative research?

Assignment 2: Ethical Challenges of Using GenAI in Research

Objective: Analyze the ethical implications of incorporating GenAI in research.

Task:

1. Read the section of the article discussing data privacy, anonymization, and consent.
2. Write a brief essay (300-400 words) analyzing a real-world scenario where ethical issues might arise from using GenAI.
3. Include suggestions for mitigating these ethical risks.

Discussion Questions:

- What are the risks associated with inputting sensitive data into GenAI tools?
- How does the regulatory landscape (e.g., GDPR vs. U.S. patchwork regulation) impact ethical AI use?

Assignment 3: Comparing Qualitative and Quantitative Research

Objective: Differentiate between qualitative and quantitative research methods and evaluate how GenAI supports each.

Task:

1. Create a comparison table highlighting the differences between qualitative and quantitative research (e.g., objectives, data types, analysis methods).
2. Use GenAI to assist with a small task in either qualitative (e.g., coding text) or quantitative (e.g., summarizing statistical data).
3. Write a reflection (200-300 words) on the effectiveness of GenAI in supporting your chosen research method.

Discussion Questions:

- In what ways does GenAI enhance qualitative research differently than quantitative research?
- What challenges might arise when using GenAI for data analysis in either research method?